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EXAMINER

ROBINSON, ELIZABETH A

| ART UNIT | PAPER NUMBER |
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1773

| MAIL DATE | DELIVERY MODE |
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07/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|---------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/552,081 | Applicant(s) DE LEUW ET AL. | |
| | Examiner Elizabeth Robinson | Art Unit 1773 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: <u>20070628</u> |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-6 and 9-16, drawn to a luminaire comprising an organic polymer binder.

Group II, claim(s) 7 and 8, drawn to a luminaire comprising an inorganic silane binder.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The special technical feature of each group is the coating binder that form the basis of the diffuse reflective coating. The binders of the two groups are of completely different types of materials. The binders of Group I are organic polymer binders. The binders of Group II are inorganic silane binders. Thus, these two groups do not share a special technical feature.

During a telephone conversation with Frank Keegan on June 25, 2007 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-6 and 9-16. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7 and 8 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

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remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

Claim 13 is objected to because of the following informalities: In line 3 of this claim, the superscript for the metal oxide, MO², should be a subscript, MO₂. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 5 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely

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exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 6 recites the broad recitation "reflects more than 90%", and the claim also recites "particularly more than 95%", which is the narrower statement of the range/limitation. Similarly, claim 10 recites the broad recitation "transmits more than 60%", and the claim also recites "particularly more than 70%", which is the narrower statement of the range/limitation.

Further it is unclear what is meant by the phrase "of normally incident back light thereon" in the third line of claim 10. The examiner is interpreting this to mean that the coated plate transmits more than 60% of normally incident light from inside the luminaire through the plate to the outside.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 14 and 16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sools et al. (US 2001/0040809).

Regarding claim 1, Sools (Paragraphs 1-3) teaches a luminaire comprising a reflector body (housing), accommodating a light source. The reflector portion has a reflective surface with a coating that comprises light-reflecting particles. Sools (Paragraph 18) further teaches that the coating is coated on the reflector portion of a Philips MPF 211 type luminaire. This type of luminaire has a light transmitting cover plate. Both diffuse and specular reflection occurs at the coating (Paragraph 6). The binder of the coating can be a fluoropolymer. A common fluoropolymer is poly(tetrafluoroethylene), which would meet the limitation of the structural formula of claim 1 with R^1 , R^2 , R^3 , and R^4 as F. Sools does not specify the solvent, however, in the final form of the luminaire (product), the solvent has been removed. Thus, the choice of solvent would be a process step. The patentability of a product is independent of how it was made. *Ex parte Jungfer* 18 USPQ 1796, 1800 (BPAI 1991); *Brystol-Myers Co. v. U.S. International Trade Commission* 15 USPQ 2d 1258 (Fed. Cir. 1989). The burden is on applicants to show product differences in product by process claims. *In re Thorpe* 227 USPQ 964 (Fed. Cir. 1985); *In re Best* 195 USPQ 430 (CCPA 1977). Therefore applicant's composition is anticipated by Sools, or in the alternative, would have been obvious to one of ordinary skill in the art based upon the prior art of Sools, due to its final product structure.

Regarding claim 2, the binder structure meets the limitations of the instant claim.

Regarding claim 3, as stated above, the choice of solvent is considered a process step.

Regarding claim 4, Sools (Paragraph 18 and Figure 1) teaches that the diffuse reflective coating is applied as a reflector on the inner back surface of the housing.

Regarding claim 5, Sools (Paragraph 18) teaches that the coating has a total reflection of more than 95%.

Regarding claim 14, Sools (Paragraph 11) teaches that the light reflecting particles of the coating can be halophosphates, calcium pyrophosphate, or titanium dioxide.

Regarding claim 16, Phillips MPF 211 type luminaries are used for canopy ceiling lighting in filling stations.

Claims 1-3, 6, 9 and 11-14 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Barnette (US 3,306,956).

Regarding Claims 1 and 9, Barnette (Column 11, lines 26-53 and Figures 9, 21 and 22) teaches a luminaire comprising a housing, with an illuminating bulb, that transmits light through a light transmitting plate. Coating layer 10 can be a separate layer that is comprised of a liquid resin (binder) and pigment particles, such as titanium dioxide and is located on an inner side of the housing, on the inside surface of the light transmitting plate. The coating makes the panel translucent and produces a diffused white light. The binders are taught in Column 20, line 22 through Column 21, line 2. These binders include acrylic acid esters, which would include methyl acrylate. This compound meets the limitation of the structural formula of claim 1 with R¹, R², and R⁴ as

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H, and R³ as COOCH₃. Barnette does not specify the solvent, however, in the final form of the luminaire (product), the solvent has been removed. Thus, the choice of solvent would be a process step. The patentability of a product is independent of how it was made. *Ex parte Jungfer* 18 USPQ 1796, 1800 (BPAI 1991); *Brystol-Myers Co. v. U.S. International Trade Commission* 15 USPQ 2d 1258 (Fed. Cir. 1989). The burden is on applicants to show product differences in product by process claims. *In re Thorpe* 227 USPQ 964 (Fed. Cir. 1985); *In re Best* 195 USPQ 430 (CCPA 1977). Therefore applicant's composition is anticipated by Barnette, or in the alternative, would have been obvious to one of ordinary skill in the art based upon the prior art of Barnette, due to its final product structure.

Regarding claim 2, the binder structure meets the limitations of the instant claim.

Regarding claim 3, as stated above the choice of solvent is considered a process step.

Regarding claims 6, 11 and 12, Barnette (Column 11, lines 41-53) teaches that, in an application as a luminaire, it is desirable that the film is of a material that absorbs or screens ultraviolet light. Barnette (Column 8, line 48-60) teaches that a material that screens or absorbs ultraviolet light can be made by reacting the surface of the polymer film with benzoyl compounds and an isocyanate.

Regarding claims 13 and 14, the pigment containing layer can also be considered an ultraviolet light blocking layer, since it incorporates titanium dioxide (TiO₂) particles within the coating.

Claim Rejections - 35 USC § 103

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barnette. As stated above, Barnette teaches a luminaire which meets the limitations of claim 9. Barnette (Column 11, lines 26-41) further teaches that the pigment in the coating layer is present in an amount to make the panels translucent. The amount of pigment added to the coating would be a result effective variable that would determine how translucent the panel is, or in other words, how much light would the panel transmit. It would be obvious to one of ordinary skill in the art to vary the amount of pigment in the coating, in order to obtain a desired level of translucence or light transmission for the panel.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnette, in view of Allen et al. (US 6,057,961). As stated above, Barnette teaches a luminaire that meets the limitations of claim 1. Barnette does not explicitly teach the uses of the luminaire. Allen (Column 29, line 20 through Column 30, line 60) teaches that luminaries with diffuse coatings that obscure the light source from direct viewing are used for both lighting fixtures and backlights for LCD screens. It would be obvious to one of ordinary skill in the art to use the luminaire of Barnette, for the uses taught in Allen, in order to provide a diffuse light source in which the light source is not directly visible.

Claims 1-5, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sools et al., in view of Dohany (US 4,141,873).

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Regarding claim 1, as stated above, Sools teaches a luminaire with a housing, light source, light-transmitting plate, and a diffuse reflective coating. The binder of the coating can be a fluoropolymer or an acrylate. The solvent for the coating is not taught. Dohany (Column 1, line 62 - Column 2, line 14) teaches a vinylidene fluoride/acrylate coating composition with a water solvent. The coating composition forms high quality coatings, which are non-polluting (Column 1, lines 51-56). Vinylidene fluoride would meet the limitation of the structural formula of claim 1 with R^1 and R^2 as H and R^3 and R^4 as F. It would be obvious to one of ordinary skill in the art to use the fluoropolymer coating composition of Dohany, as the fluoropolymer binder of Sools, in order to obtain a high quality coating does not use air-polluting solvents.

Regarding claim 2, the binder structure meets the limitations of the instant claim.

Regarding claim 3, as stated above the solvent is water.

Regarding claim 4, Sools (Paragraph 18 and Figure 1) teaches that the diffuse reflective coating is applied as a reflector on the inner back surface of the housing.

Regarding claim 5, Sools (Paragraph 18) teaches that the coating has a total reflection of more than 95%.

Regarding claim 14, Sools (Paragraph 11) teaches that the light reflecting particles of the coating can be halophosphates, calcium pyrophosphate, or titanium dioxide.

Regarding claim 16, Phillips MPF 211 type luminaries are used for canopy ceiling lighting in filling stations.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Robinson whose telephone number is 571-272-7129. The examiner can normally be reached on Monday- Friday 8 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ear



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